

## CLAIMS:

1. Circuit arrangement for operating a high pressure discharge lamp comprising
  - input terminals for connection to a supply voltage source,
  - a DC-DC-converter coupled to the input terminals for generating a DC current out of a supply voltage supplied by the supply voltage source and comprising
    - a control circuit for controlling the DC current at a value that is represented by a reference signal Sref,
    - a reference circuit for generating the reference signal Sref, and an output capacitor,
    - a commutator for commutating the polarity of the DC current and comprising lamp connection terminals and an ignition inductor,
    - a first circuit part for modulating the reference signal Sref at a modulation frequency that equals the frequency of the commutation of the DC current by subsequently
      - decreasing the reference signal Sref by an amount  $\Delta S_{ref}$  during a first time interval  $\Delta t_1$  that starts a second time interval  $\Delta t_2$  before each commutation of the DC current,
      - maintaining the reference signal at the decreased value during a third time interval  $\Delta t_3$ ,
      - increasing the reference signal Sref by an amount  $\Delta S_{ref}$  during a fourth time interval  $\Delta t_4$ ,
- 10 characterized in that the circuit arrangement further comprises
  - a second circuit part for adjusting at least one parameter chosen from the group formed by  $\Delta S_{ref}$ ,  $\Delta t_1$ ,  $\Delta t_2$ ,  $\Delta t_3$  and  $\Delta t_4$  in dependency of a parameter chosen from the group formed by the power consumed by the lamp, the lamp voltage and the lamp current.
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2. Circuit arrangement according to claim 1, wherein the second circuit part comprises a memory in which one or more tables are stored, each of the tables comprising a range of lamp power levels and for each value of the lamp power level in the range a corresponding value for one or more of the parameters  $\Delta S_{ref}$ ,  $\Delta t_1$ ,  $\Delta t_2$ ,  $\Delta t_3$  and  $\Delta t_4$ .

3. Circuit arrangement according to claim 2, wherein each of the tables comprises data for a predetermined range of the lamp voltage.
- 5 4. Circuit arrangement according to claim 1, wherein the second circuit part comprises a memory in which a one or more tables are stored comprising a range of lamp voltage values and for each value of the lamp voltage in the range a corresponding value for one or more of the parameters  $\Delta S_{ref}$ ,  $\Delta t_1$ ,  $\Delta t_2$ ,  $\Delta t_3$  and  $\Delta t_4$ .
- 10 5. Circuit arrangement according to claim 4, wherein each of the tables comprises data for a predetermined range of the lamp power.
- 6.. Circuit arrangement according to claims 1-5, wherein the second circuit part comprises a microcontroller.